IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A catalyst for producing a rigid polyurethane foam by means of at least one blowing agent selected from the group consisting of 1,1,1,3,3-pentafluoropropane (HFC-245fa), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and a low boiling point hydrocarbon, which comprises:

at least one amine compound (1) selected from the group consisting of dimethylethylamine, dimethylpropylamine, dimethylbutylamine, dimethylpentylamine, dimethylhexylamine, dimethylheptylamine, dimethyloctylamine, dimethylnonylamine, dimethyldecylamine, dimethylundecylamine, dimethyldodecylamine, dimethyltridecylamine, dimethyltetradecylamine, dimethylpentadecylamine and dimethylhexadecylamine,

and at least one amine compound (2) selected from the group consisting of triethylenediamine, N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine,

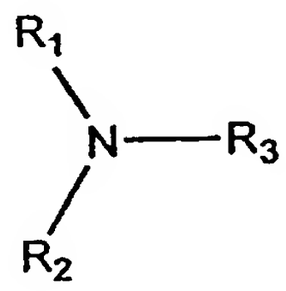
wherein said at least one amine compound (1) and said at least one amine compound (2) are present in amounts effective to improve at least one property of a rigid polyurethane foam produced by means of said at least one blowing agent and said catalyst, compared to an otherwise identical rigid polyurethane foam produced using said at least one amine compound (1) alone, or said at least one amine compound (2) alone, as the catalyst, and wherein said at least one property includes dimensional stability.

Claims 2-3 (Canceled).

Claim 4 (Previously Presented): The catalyst for producing a rigid polyurethane foam according to Claim 1, wherein the composition of the at least one amine compound (1) and

the at least one amine compound (2) comprises from 10 to 95 wt% of the at least one amine compound (1) and from 90 to 5 wt% of the at least one amine compound (2).

Claim 5 (Withdrawn): A catalyst for producing a rigid polyisocyanurate foam by means of at least one blowing agent selected from the group consisting of 1,1,1,3,3-pentafluoropropane (HFC-245fa), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and a low boiling point hydrocarbon, which comprises an aliphatic amine compound of the following formula (1):



(1)

wherein each of R_1, R_2 and R_3 which are independent of one another, is a $C_{1\text{-}20}$ alkyl group, and a polyisocyanurate catalyst.

Claim 6 (Withdrawn): The catalyst for producing a rigid polyisocyanurate foam according to Claim 5, wherein in the formula (1), each of R_1, R_2 and R_3 which are independent of one another, is a methyl group, an ethyl group, a propyl group, a butyl group, a pentyl group, a hexyl group, a heptyl group, an octyl group, a nonyl group, a decyl group, an undecyl group, a dodecyl group, a tridecyl group, a tetradecyl group, a heptadecyl group or a hexadecyl group.

Claim 7 (Withdrawn): The catalyst for producing a rigid polyisocyanurate foam according to Claim 5, wherein the amine compound of the formula (1) is at least one amine compound selected from the group consisting of dimethylethylamine, dimethylpropylamine,

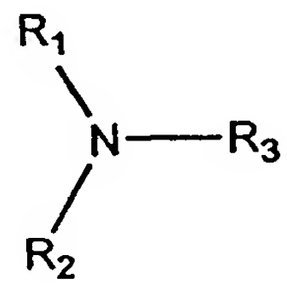
dimethylbutylamine, dimethylpentylamine, dimethylhexylamine, dimethylheptylamine, dimethyloctylamine, dimethylnonylamine, dimethyldecylamine, dimethylundecylamine, dimethyldodecylamine, dimethyltridecylamine, dimethyltetradecylamine, dimethylpentadecylamine and dimethylhexadecylamine.

Claim 8 (Withdrawn): The catalyst for producing a rigid polyisocyanurate foam according to Claim 5, wherein the polyisocyanurate catalyst is at least one polyisocyanurate catalyst selected from the group consisting of organic metal type catalysts such as alkali metal salts of carboxylic acids, alkaline earth metal salts of carboxylic acids, metal alcoholates, metal phenolates and metal hydroxides, tertiary amines, tertiary phosphines, onium salt compounds of phosphorus and quaternary ammonium salts.

Claim 9 (Withdrawn): The catalyst for producing a rigid polyisocyanurate foam according to Claim 5, wherein the composition of the aliphatic amine compound of the formula (1) and the polyisocyanurate catalyst, comprises from 10 to 90 wt% of the aliphatic amine compound of the formula (1) and from 90 to 10 wt% of the polyisocyanurate catalyst.

Claim 10 (Withdrawn): A process for producing a rigid polyurethane foam, which comprises reacting a polyol with a polyisocyanate in the presence of an amine catalyst and a blowing agent, wherein the amine catalyst is:

a catalyst composition comprising an amine compound of the following formula (1):



(1)

wherein each of R_1, R_2 and R_3 which are independent of one another, is a C_{1-20} alkyl group, and at least one compound selected from the group consisting of triethylenediamine, N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine; and the blowing agent is:

at least one blowing agent selected from the group consisting of 1,1,1,3,3-pentafluoropropane (HFC-245fa), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and a low boiling point hydrocarbon.

Claim 11 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein in the formula (1), each of R_1, R_2 and R_3 which are independent of one another, is a methyl group, an ethyl group, a propyl group, a butyl group, a pentyl group, a hexyl group, a heptyl group, an octyl group, a nonyl group, a decyl group, an undecyl group, a dodecyl group, a tridecyl group, a tetradecyl group, a heptadecyl group or a hexadecyl group.

Claim 12 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein the amine compound of the formula (1) is at least one amine compound selected from the group consisting of trimethylamine, dimethylethylamine, dimethylpropylamine, dimethylbutylamine, dimethylpentylamine, dimethylhexylamine, dimethylheptylamine, dimethyloctylamine, dimethylnonylamine, dimethyldecylamine, dimethylundecylamine, dimethyldodecylamine, dimethyltridecylamine, dimethyltetradecylamine, dimethylpentadecylamine and dimethylhexadecylamine.

Claim 13 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein the composition of the amine compound of the formula (1)

and said at least one amine compound selected from the group consisting of triethylenediamine, N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine, comprises from 10 to 95 wt% of the amine compound of the formula (1) and from 90 to 5 wt% of said at least one amine compound selected from the group consisting of triethylenediamine, N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine.

Claim 14 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein the at least one blowing agent comprises said low boiling point hydrocarbon, which is a hydrocarbon having a boiling point of from –30 to 90°C.

Claim 15 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 14, wherein the hydrocarbon having a boiling point of from –30 to 90°C, is at least one hydrocarbon selected from the group consisting of propane, butane, 2-methylpropane, pentane, cyclopentane, 2-methylbutane, 2,2-dimethylpropane, cyclopropane, hexane, 2-methylpentane, 3-methylpentane, 2,2-dimethylbutane, cyclohexane, 2,4-dimethylpropane, 3,3-dimethylpropane and 2,2,3-trimethylbutane.

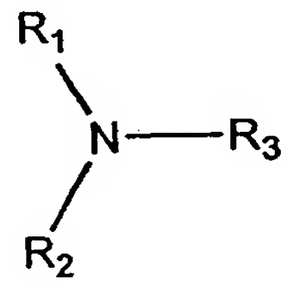
Claim 16 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein the amine catalyst is used in an amount of from 0.01 to 20 parts by weight per 100 parts by weight of the polyol.

Claim 17 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein a foam stabilizer is used as an auxiliary agent.

Claim 18 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein a cross-linking agent and/or a chain extender is used as an auxiliary agent.

Claim 19 (Withdrawn): The process for producing a rigid polyurethane foam according to Claim 10, wherein a flame retardant is used as an auxiliary agent.

Claim 20 (Withdrawn): A process for producing a rigid polyisocyanurate foam, which comprises reacting a polyol with a polyisocyanate in the presence of a catalyst and a blowing agent, wherein the catalyst is a catalyst composition comprising an aliphatic amine compound of the following formula (1):



(1)

wherein each of R_1, R_2 and R_3 which are independent of one another, is a C_{1-20} alkyl group, and a polyisocyanurate catalyst, and the blowing agent is at least one blowing agent selected from the group consisting of 1,1,1,3,3-pentafluoropropane (HFC-245fa), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and a low boiling point hydrocarbon.

Claim 21 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein in the formula (1), each of R_1, R_2 and R_3 which are independent of one another, is a methyl group, an ethyl group, a propyl group, a butyl group, a pentyl group, a hexyl group, a heptyl group, an octyl group, a nonyl group, a decyl group,

an undecyl group, a dodecyl group, a tridecyl group, a tetradecyl group, a heptadecyl group or a hexadecyl group.

Claim 22 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein the aliphatic amine compound of the formula (1) is at least one amine compound selected from the group consisting of dimethylethylamine, dimethylpropylamine, dimethylbutylamine, dimethylpentylamine, dimethylhexylamine, dimethylheptylamine, dimethyloctylamine, dimethylnonylamine, dimethyldecylamine, dimethylundecylamine, dimethyldodecylamine, dimethyltridecylamine, dimethyltetradecylamine, dimethylpentadecylamine and dimethylhexadecylamine.

Claim 23 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein the polyisocyanurate catalyst is at least one polyisocyanurate catalyst selected from the group consisting of organic metal type catalysts such as alkali metal salts of carboxylic acids, alkaline earth metal salts of carboxylic acids, metal alcoholates, metal phenolates and metal hydroxides, tertiary amines, tertiary phosphines, onium salt compounds of phosphorus and quaternary ammonium salts.

Claim 24 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein the composition of the aliphatic amine compound of the formula (1) and the polyisocyanurate catalyst, comprises from 10 to 90 wt% of the aliphatic amine compound of the formula (1) and from 90 to 10 wt% of the polyisocyanurate catalyst.

Claim 25 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein the catalyst composition comprising the aliphatic amine of

the formula (1) and the polyisocyanurate catalyst, is used in an amount of from 0.01 to 40 parts by weight per 100 parts by weight of the polyol.

Claim 26 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein a foam stabilizer is used as an auxiliary agent.

Claim 27 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein a cross-linking agent and/or a chain extender is used as an auxiliary agent.

Claim 28 (Withdrawn): The process for producing a rigid polyisocyanurate foam according to Claim 20, wherein a flame retardant is used as an auxiliary agent.

Claim 29 (Previously Presented): The catalyst for producing a rigid polyurethane foam according to Claim 1, wherein the at least one amine compound (2) comprises triethylenediamine.

Claim 30 (Previously Presented): The catalyst for producing a rigid polyurethane foam according to Claim 1, wherein the at least one amine compound (2) comprises N,N,N',N'-tetramethyl-1,6-hexanediamine.

Claim 31 (Previously Presented): The catalyst for producing a rigid polyurethane foam according to Claim 1, wherein the at least one amine compound (2) comprises N,N-dimethylcyclohexylamine.

Claim 32 (Previously Presented): The catalyst for producing a rigid polyurethane foam according to Claim 1, which additionally comprises at least one other catalyst.

Claim 33 (Previously Presented): The catalyst for producing a rigid polyurethane foam according to Claim 32, wherein the at least one other catalyst is selected from the group consisting of organic metal catalysts, metal carboxylate catalysts, tertiary amine catalysts other than amine compounds (1) and other than amine compounds (2), and quaternary ammonium salt catalysts.

Claim 34 (New): A catalyst for producing a rigid polyurethane foam by means of at least one blowing agent selected from the group consisting of 1,1,1,3,3-pentafluoropropane (HFC-245fa), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and a low boiling point hydrocarbon, which comprises:

at least one amine compound (1) selected from the group consisting of dimethylpropylamine, dimethylbutylamine, dimethylpentylamine, dimethylhexylamine, dimethylheptylamine, dimethyloctylamine, dimethylnonylamine, dimethyldecylamine, dimethylundecylamine, dimethyldodecylamine, dimethyltridecylamine, dimethyltetradecylamine, dimethylpentadecylamine and dimethylhexadecylamine,

and at least one amine compound (2) selected from the group consisting of triethylenediamine, N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine.

Claim 35 (New): The catalyst for producing a rigid polyurethane foam according to Claim 34, wherein the at least one amine compound (1) is selected from the group consisting

of dimethylbutylamine, dimethylhexylamine, dimethyloctylamine, and dimethyldodecylamine.

Claim 36 (New): The catalyst for producing a rigid polyurethane foam according to Claim 34, wherein said at least one amine compound (1) and said at least one amine compound (2) are present in amounts effective to improve at least one property of a rigid polyurethane foam produced by means of said at least one blowing agent and said catalyst, compared to an otherwise identical rigid polyurethane foam produced using said at least one amine compound (1) alone, or said at least one amine compound (2) alone, as the catalyst, and wherein said at least one property includes dimensional stability.

Claim 37 (New): The catalyst for producing a rigid polyurethane foam according to Claim 35, wherein said at least one amine compound (1) and said at least one amine compound (2) are present in amounts effective to improve at least one property of a rigid polyurethane foam produced by means of said at least one blowing agent and said catalyst, compared to an otherwise identical rigid polyurethane foam produced using said at least one amine compound (1) alone, or said at least one amine compound (2) alone, as the catalyst, and wherein said at least one property includes dimensional stability.

Claim 38 (New): A catalyst for producing a rigid polyurethane foam by means of at least one blowing agent selected from the group consisting of 1,1,1,3,3-pentafluoropropane (HFC-245fa), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and a low boiling point hydrocarbon, which comprises:

at least one amine compound (1) selected from the group consisting of dimethylethylamine, dimethylpropylamine, dimethylbutylamine, dimethylpentylamine,

dimethylhexylamine, dimethylheptylamine, dimethyloctylamine, dimethylnonylamine, dimethyldecylamine, dimethylundecylamine, dimethyldodecylamine, dimethyltridecylamine, dimethyltetradecylamine, dimethylpentadecylamine and dimethylhexadecylamine,

and at least one amine compound (2) selected from the group consisting of triethylenediamine, N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine,

wherein said at least one amine compound (1) and said at least one amine compound (2) are present in amounts effective to improve a balance of properties of a rigid polyurethane foam produced by means of said at least one blowing agent and said catalyst, compared to an otherwise identical rigid polyurethane foam produced using said at least one amine compound (1) alone, or said at least one amine compound (2) alone, as the catalyst, and wherein said balance of properties is a combination of flowability, adhesive strength and dimensional stability.

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by inserting amounts of the compounds (1) and (2) in functional amounts, as supported in the specification at page 12, lines 5-12, and by the comparative data. New Claims 34-38 have been added. Claim 34 is identical to Claim 1 prior to the above amendment, except that dimethylethylamine has been omitted from the compound (1) Markush group. Claim 35 limits the compound (1) Markush group to those exemplified in the comparative data, such as in Table 1 (continued) at page 57 of the specification. Claims 36 and 37 depend on Claims 34 and 35, respectively, but contain the above-discussed limitation added to Claim 1. Claim 38 is analogous to Claim 1, but the functional amounts are in reference to a balance of the recited properties.

No new matter is believed to have been added by the above amendment. Claims 1, 4, and 29-38 are now active in the application; Claims 5-28 stand withdrawn from consideration.